

WHAT IS CLAIMED IS:

1. A device for mounting a rotating member comprising:
a first structure;
a bore formed in the first structure;
a ring housed in the bore;
one end of the rotating member comprising a shaft inserted in the ring, wherein
the ring comprises a diabolo shape generated by a revolution about an axis of the
shaft.
2. The device according to claim 1 wherein the diabolo is formed by a hyperboloid
structure comprising a set of inclined beams connected to a first crown of the ring and
connected to a second crown of the ring.
3. The device according to claim 2 wherein the hyperboloid shape has an inner
diameter that is less than an initial diameter, the difference in curvature forming an elastic
fit over the rotating member.
4. The device according to claim 2 comprising twenty beams.
5. The device according to claim 3 comprising twenty beams.
6. The device according to claim 2 wherein the inclination of the beams is about 50°
relative to a plane perpendicular to the axis of the shaft.
7. The device according to claim 3 wherein the inclination of the beams is about 50°
relative to a plane perpendicular to the axis of the shaft.
8. The device according to claim 4 wherein the inclination of the beams is about 50°
relative to a plane perpendicular to the axis of the shaft.

9. The device according to claim 6 wherein the inclination of the beams is $50^{\circ} \pm 10^{\circ}$.
10. The device according to claim 6 wherein the inclination of the beams is $50^{\circ} \pm 5^{\circ}$.
11. The device according to claim 1 wherein the diabolo shape has a twist angle less than or greater than 50° .
12. The device according to claim 2 wherein the diabolo shape has a twist angle less than or greater than 50° .
13. The device according to claim 3 wherein the diabolo shape has a twist angle less than or greater than 50° .
14. The device according to claim 4 wherein the diabolo shape has a twist angle less than or greater than 50° .
15. The device according to claim 2 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.
16. The device according to claim 3 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.
17. The device according to claim 4 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.
18. The device according to claim 6 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.

19. The device according to claim 9 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.

20. The device according to claim 10 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.

21. The device according to claim 11 wherein the hyperboloid structure is open along an aperture, this aperture being made in at least one diametrically opposite parts of the first and second crowns.

22. The device according to claim 2 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

23. The device according to claim 3 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

24. The device according to claim 4 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

25. The device according to claim 6 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

26. The device according to claim 9 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

27. The device according to claim 10 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

28. The device according to claim 11 wherein the hyperboloid structure is open along an aperture, the aperture being made in two diametrically opposed parts of the first and second crowns.

29. The device according to claim 2 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

30. The device according to claim 3 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

31. The device according to claim 4 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

32. The device according to claim 6 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

33. The device according to claim 9 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

34. The device according to claim 10 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.

35. The device according to claim 11 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.
36. The device according to claim 15 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.
37. The device according to claim 22 wherein the first and second crowns comprise a circular, cylindrical part with a generatrix line parallel to the axis of the shaft.
38. The device according to claim 1 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.
39. The device according to claim 2 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.
40. The device according to claim 3 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.
41. The device according to claim 4 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.
42. The device according to claim 6 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

43. The device according to claim 9 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

44. The device according to claim 10 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

45. The device according to claim 11 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

46. The device according to claim 15 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

47. The device according to claim 22 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

48. The device according to claim 29 wherein another end of the shaft is disposed in another structure, the another structure being lighter or having lower sensitivity to vibratory forces generating an acoustic source than the first structure.

49. The device according to claim 1 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

50. The device according to claim 2 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

51. The device according to claim 3 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

52. The device according to claim 4 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

53. The device according to claim 6 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

54. The device according to claim 9 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

55. The device according to claim 10 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

56. The device according to claim 11 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

57. The device according to claim 15 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

58. The device according to claim 22 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

59. The device according to claim 29 wherein another end of the shaft is disposed in another structure, the another end being supported by a second ring having a diabolo shape generated by a revolution about an axis of the shaft.

60. The device according to claim 1 wherein the shaft is affixed to an anode of an X-ray tube.

61. A method for the manufacture of a diabolo comprising:

forming slots in a plate, the slots being interposed with non-inclined parallel beams, the parallel beams being held together at their ends by lintels;

shaping the plate around a circular chuck with an axis perpendicular to the lintels;

and

twisting the circularly shaped lintels, with respect to each other, about an axis collinear with the axis of the chuck to incline the beams.

62. A method for the manufacture of a diabolo comprising:

forming slots in a plate, the slots being interposed with parallel beams, the parallel beams being held together at their ends by lintels, the beams being inclined in relation to a direction perpendicular to the lintels;

deforming the formed plate by being force into a mold with a shape generated by revolution, with an axis of revolution orthogonal to the directions of the lintels; and

the mold having an embossment in a central part between the ends that receive the lintels.

63. The method according to claim 61 wherein the plate is a parallelogram.

64. The method according to claim 62 wherein the plate is a parallelogram.

- 65. The method according to claim 61 wherein the plate is rectangular.
- 66. The method according to claim 61 wherein the formed slots are straight between the lintels.
- 67. The method according to claim 62 wherein the formed slots are straight between the lintels.
- 68. The method according to claim 61 wherein the formed slots are rectilinear between the lintels.
- 69. The method according to claim 62 wherein the formed slots are rectilinear between the lintels.
- 70. The method according to claim 61 wherein the formed slots are oriented at a right angle to the direction of the lintels.
- 71. The method according to claim 62 wherein the formed slots are oriented at a right angle to the direction of the lintels.
- 72. The method according to claim 61 wherein an aperture is formed in at least one diametrically opposite parts of the lintels.
- 73. The method according to claim 62 wherein an aperture is formed in at least one diametrically opposite parts of the lintels.
- 74. The method according to claim 61 wherein an aperture is formed in two diametrically opposed parts of the lintels.

75. The method according to claim 62 wherein an aperture is formed in two diametrically opposed parts of the lintels.

76. A method for the manufacture of a diablo comprising:
forming a diablo from a cylinder by removing portions of the cylinder; and
forming beams in a wall of the diablo, the beams being inclined.

77. The method according to claim 61 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

78. The method according to claim 62 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

79. The method according to claim 63 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

80. The method according to claim 65 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

81. The method according to claim 66 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

82. The method according to claim 68 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

83. The method according to claim 70 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

84. The method according to claim 72 wherein the inclination of the beams is about 50° relative to an axis of the diablo.

85. The method according to claim 74 wherein the inclination of the beams is about 50° relative to an axis of the diabolo.
86. The method according to claim 76 wherein the inclination of the beams is about 50° relative to an axis of the diabolo.
87. The method according to claim 77 wherein the inclination of the beams is $50^\circ \pm 10^\circ$.
88. The method according to claim 77 wherein the inclination of the beams is $50^\circ \pm 5^\circ$.
89. The method according to claim 61 wherein the diabolo shape has twist angle greater than or less than 50° .
90. The method according to claim 62 wherein the diabolo shape has twist angle greater than or less than 50° .
91. The method according to claim 76 wherein the diabolo shape has twist angle greater than or less than 50° .
92. The method according to claim 61 wherein the diabolo has a hyperboloid shape.
93. The method according to claim 62 wherein the diabolo has a hyperboloid shape.
94. The method according to claim 76 wherein the diabolo has a hyperboloid shape.
95. The method according to claim 92 wherein the hyperboloid shape has an inner curvature diameter that is less than the initial diameter.